PEDIATRIC CARDIAC ARREST
(1 Day to 14 Years of Age)

FIELD ASSESSMENT/TREATMENT INDICATORS

Cardiac arrest in a non-traumatic setting

Consider the potential causes of arrest for age

BLS INTERVENTIONS

1. Assess patient, maintain appropriate airway, begin CPR according to current AHA Guidelines
   a. Ventilate at rate of 12 to 20 per minute. Ventilatory rate will decrease as patient age increases. Ventilatory volumes shall be the minimum necessary to cause chest rise.
   b. Compression rate shall be 100 per minute
2. If patient 1 year of age or older, utilize AED per Protocol Reference #6301 AED

ALS INTERVENTIONS

1. Initiate CPR for 2 minutes if no CPR was performed prior to arrival and down time is greater than 5 minutes
2. Establish advanced airway when resources are available, with minimal interruption to CPR. After advanced airway established, compressions would then be continued at 100 per minute without pauses during ventilations. Give 8 to 10 breaths per minute
3. Determine cardiac rhythm, proceed to appropriate intervention:

Ventricular Fibrillation/Pulseless Ventricular Tachycardia

1. Initial defibrillation at 2j/kg do not exceed 200joules for monophasic or biphasic equivalent per manufacture.
2. Perform CPR for 2 minutes after each defibrillation.
3. Administer Epinephrine during 2-minute cycle of CPR after each defibrillation.
   a. 1 day to 8 years: 0.01mg/kg IO/IV, (do not exceed adult dosage) or 0.1mg/kg ET
   b. 9 to 14 years: 1.0mg IV/IO or 2.0mg ET
4. Reassess rhythm, after each 2-minute cycle of CPR. If VF/VT persists for 2nd and subsequent shocks defibrillate at 4j/kg, do not exceed 360 joules (or biphasic equivalent).
5. After two cycles of CPR administer Lidocaine;
   a. 1 day to 8 years: 1mg/kg IO/IV/ET
   b. 9 to 14 years: 1mg/kg IV/IO or 2mg/kg ET
6. May repeat Lidocaine at 0.5mg/kg after 5 minutes up to total of 3mg/kg.
7. If patient remains in pulseless VF/VT after five cycles of CPR, consult base hospital.

Pulseless Electrical Activity/Asystole

1. Assess for reversible causes and initiate treatment.
2. Continue CPR with evaluation of rhythm every 2 minutes.
3. Administer initial fluid bolus of 20ml/kg for all ages, may repeat at;
   a. 1 day to 8 years: 20ml/kg
   b. 9 to 14 years: 300ml.

4. Administer Epinephrine during 2-minute cycle of CPR after each rhythm evaluation
    a. 1 day to 8 years: 0.01mg/kg IO/IV0 or 0.1mg/kg ET
    b. 9 to 14 years: 1.0mg IV/IO or 2.0mg ET
5. For patients 9 to 14 years Atropine1.0mg may be given every 5 minutes, to maximum of 3mg.
6. Consider termination of efforts if patient remains in asystole or PEA after successful intubation and initial medications without a reversible cause identified.

Utilize the following treatment modalities while managing the pediatric cardiac arrest patient

- Vascular access
  1 day to 8 years: IO preferred per Protocol Reference #4026 Intraosseous Infusion
  9 to 14 years: IV/IO

  If unable to obtain vascular access, medications may be administered via ET per protocol Reference #4013 Tracheal Instillation of Medications.

  May initiate second IV/IO if indicated
- Administer fluid bolus, may repeat twice for continued signs of inadequate tissue perfusion
  1 day to 8 years: 20ml/kg NS evaluate after each bolus
  9 to 14 years: Initial bolus at 20ml/kg NS subsequent boluses at 300ml NS evaluate after each bolus
  In RCF may give 2 additional fluid boluses if indicated
- Obtain blood glucose, if indicated administer Dextrose according to Protocol Reference #7007 Pediatric Altered Level of Consciousness
- Insert Naso/Orogastric tube per Protocol Reference #4021 Insertion of Nasogastric/Orogastric Tube
- Naloxone for suspected opiate overdose, may repeat once as clinically indicated
  1 day to 8 years: 0.1 mg/kg IO/IV. Do not exceed adult dosage.
  9 to 14 years: 2mg IV/IO

NOTE

1. For continued signs of inadequate tissue perfusion **after** successful resuscitation;
   1 day to 8 years: Epinephrine (1:10,000) 0.005mg/kg IO/IV every ten minutes.
   9 to 14 years: Dopamine 400mg in 250ml of NS to infuse at 5-20 mcg/kg/min IV titrated to maintain signs of adequate tissue perfusion
2. Base hospital physician may order additional medications or interventions as indicated by patient condition.
3. Base hospital contact is <u>required</u> to terminate resuscitative measures. A copy of the EKG should be attached to the PCR for documentation purposes.

APPROVED:

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ICEMA Medical Director Date

_____ _____
Inyo & Mono Co. Health Officer Date ICEMA Executive Director Date